

INCH-POUND

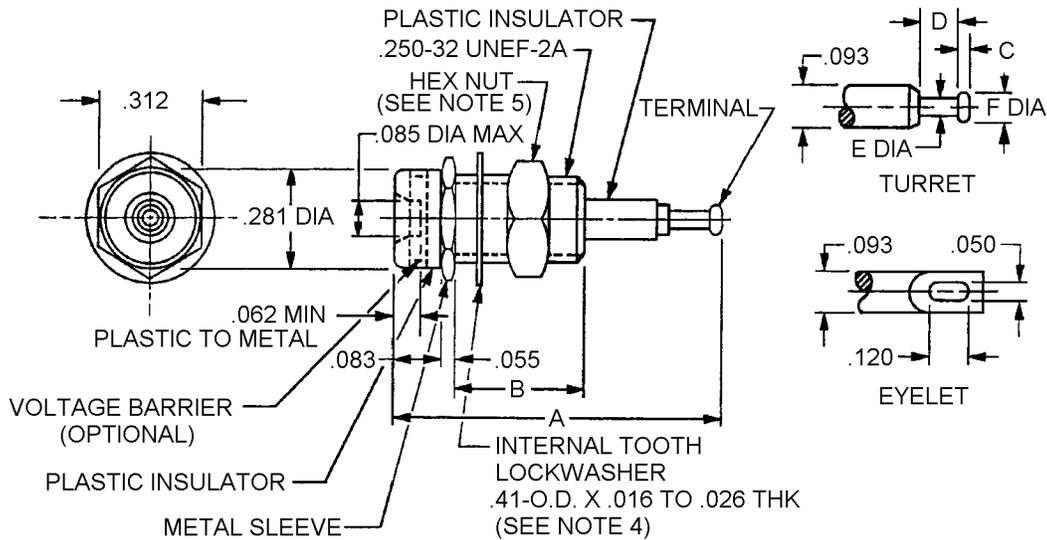
MIL-DTL-39024/1D  
 3 February 2003  
 SUPERSEDING  
 MIL-C-39024/1C  
 14 August 1991

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, TEST POINT TYPE, PANEL TYPE;  
 SINGLE TEST POINT (THREADED), LOW VOLTAGE

This specification is approved for use by all Departments  
 and Agencies of the Department of Defense.

The requirements for acquiring the product described herein  
 shall consist of this specification and MIL-DTL-39024.



| Inches | mm   | Inches | mm   |
|--------|------|--------|------|
| .016   | 0.41 | .085   | 2.16 |
| .026   | 0.66 | .093   | 2.36 |
| .050   | 1.27 | .120   | 3.05 |
| .055   | 1.40 | .250   | 6.35 |
| .062   | 1.57 | .281   | 7.62 |
| .083   | 2.11 | .312   | 7.92 |
|        |      | .41    | 10.4 |

NOTES:

1. Dimensions are in inches. (See table I for dimensions not shown on figure.)
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are  $\pm .010$  (0.25 mm) for three place decimals and  $\pm .03$  (0.8 mm) for two place decimals.
4. Parts supplied unassembled.
5. Hex nut .338 (8.59 mm)  $\pm .006$  (0.15 mm) across flats x .09 (2.3 mm)  $\pm .03$  (0.8 mm) thick.

FIGURE 1. Configuration and dimensions.

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 TABLE I. Design and identification data.

| Dash number | Terminal style | Dimensions <sup>1/</sup>                  |                 |                |                |                |                | Insulation |                                       |
|-------------|----------------|---|-----------------|----------------|----------------|----------------|----------------|------------|---------------------------------------|
|             |                | A   | B               | C              | D              | E              | F              | Color      | Number in accordance with FED-STD-595 |
| -01         | Turret         | 1.000 max<br>(25.40)                      | .428<br>(10.87) | .030<br>(0.76) | .130<br>(3.30) | .070<br>(1.78) | .100<br>(2.54) | White      | 17875                                 |
| -02         | "              | "   | "               | "              | "              | "              | "              | Red        | 11105                                 |
| -03         | "              | "   | "               | "              | "              | "              | "              | Black      | 17038                                 |
| -04         | "              | "   | "               | "              | "              | "              | "              | Brown      | 10075                                 |
| -05         | "              | "   | "               | "              | "              | "              | "              | Green      | 14110                                 |
| -06         | "              | "   | "               | "              | "              | "              | "              | Orange     | 12246                                 |
| -07         | "              | "   | "               | "              | "              | "              | "              | Blue       | 15123                                 |
| -08         | "              | "   | "               | "              | "              | "              | "              | Yellow     | 13655                                 |
| -09         | "              | "   | "               | "              | "              | "              | "              | Gray       | 16187                                 |
| -10         | "              | "   | "               | "              | "              | "              | "              | Purple     | 27144                                 |
| -11         | Turret         | <u>.703</u><br>.672<br>(17.86)<br>(17.07) | .250<br>(6.35)  | .020<br>(0.51) | .105<br>(2.67) | .060<br>(1.52) | .093<br>(2.36) | White      | 17875                                 |
| -12         | "              | "   | "               | "              | "              | "              | "              | Red        | 11105                                 |
| -13         | "              | "   | "               | "              | "              | "              | "              | Black      | 17038                                 |
| -14         | "              | "   | "               | "              | "              | "              | "              | Brown      | 10075                                 |
| -15         | "              | "   | "               | "              | "              | "              | "              | Green      | 14110                                 |
| -16         | "              | "   | "               | "              | "              | "              | "              | Orange     | 12246                                 |
| -17         | "              | "   | "               | "              | "              | "              | "              | Blue       | 15123                                 |
| -18         | "              | "   | "               | "              | "              | "              | "              | Yellow     | 13655                                 |
| -19         | "              | "   | "               | "              | "              | "              | "              | Gray       | 16187                                 |
| -20         | "              | "   | "               | "              | "              | "              | "              | Purple     | 27144                                 |
| -21         | Eyelet         | 1.000 max<br>(25.40)                      | .428<br>(10.87) |                |                |                |                | White      | 17875                                 |
| -22         | "              | "   | "               |                |                |                |                | Red        | 11105                                 |
| -23         | "              | "   | "               |                |                |                |                | Black      | 17038                                 |
| -24         | "              | "   | "               |                |                |                |                | Brown      | 10075                                 |
| -25         | "              | "   | "               |                |                |                |                | Green      | 14110                                 |
| -26         | "              | "   | "               |                |                |                |                | Orange     | 12246                                 |
| -27         | "              | "   | "               |                |                |                |                | Blue       | 15123                                 |
| -28         | "              | "   | "               |                |                |                |                | Yellow     | 13655                                 |
| -29         | "              | "   | "               |                |                |                |                | Gray       | 16187                                 |
| -30         | "              | "   | "               |                |                |                |                | Purple     | 27144                                 |
| -31         | Eyelet         | <u>.750</u><br>.719<br>(19.05)<br>(18.26) | .250<br>(6.35)  |                |                |                |                | White      | 17875                                 |
| -32         | "              | "   | "               |                |                |                |                | Red        | 11105                                 |
| -33         | "              | "   | "               |                |                |                |                | Black      | 17038                                 |
| -34         | "              | "   | "               |                |                |                |                | Brown      | 10075                                 |
| -35         | "              | "   | "               |                |                |                |                | Green      | 14110                                 |
| -36         | "              | "   | "               |                |                |                |                | Orange     | 12246                                 |
| -37         | "              | "   | "               |                |                |                |                | Blue       | 15123                                 |
| -38         | "              | "   | "               |                |                |                |                | Yellow     | 13655                                 |
| -39         | "              | "   | "               |                |                |                |                | Gray       | 16187                                 |
| -40         | "              | "   | "               |                |                |                |                | Purple     | 27144                                 |

<sup>1/</sup> Metric equivalents are in parentheses.

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REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figure 1 and table I.

Terminals: Shall be capable of being wired with two type E, AWG 20 wires in accordance with NEMA-HP3. Configuration shall be specified on figure 1 and table I.

Test probe: .080 ± .001 inch in diameter and .438 inch (min) length.

Contact current rating: 5 amperes (max).

Contact resistance: A test probe in accordance MIL-DTL-39024 shall be fully inserted in the connector. With a current of 5 amperes, potential drop shall be measured between the connector terminal and the extreme end of the solder cup on the test probe. Measured values shall be 20 millivolts (max).

Dielectric withstanding voltage (at sea level):

Test voltage shall be as follows:

| <u>Dash numbers</u> | <u>Volts, rms (60 Hz)</u> |
|---------------------|---------------------------|
| -01 thru -10        | 3,000                     |
| -11 thru -20        | 2,500                     |
| -21 thru -30        | 3,000                     |
| -31 thru -40        | 2,500                     |

Insertion and withdrawal forces:

Insertion force: 4.5 pounds (max).

Withdrawal force: 0.4 pound (min).

Identification marking:

Part or Identifying Number (PIN): M39024/1-(dash number from table I).

Operating conditions:

Operating voltage is as follows:

| <u>Dash numbers</u>           | <u>At sea level</u>    | <u>At 50,000 feet</u> |
|-------------------------------|------------------------|-----------------------|
| -01 thru -10 and -21 thru -30 | 2,000 volts rms, 60 Hz | 525 volts rms, 60 Hz  |
| -11 thru -20 and -31 thru -40 | 1,800 volts rms, 60 Hz | 500 volts rms, 60 Hz  |

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Maximum thickness of panel on which these connectors may be used is as follows:

| <u>Dash numbers</u> | <u>Max panel thickness</u> |
|---------------------|----------------------------|
| -01 thru -10        | .234 inch                  |
| -11 thru -20        | .094 inch                  |
| -21 thru -30        | .234 inch                  |
| -31 thru -40        | .094 inch                  |

Qualification: Not applicable.

Quality conformance inspection. Groups A and B tests of MIL-DTL-39024 shall be applicable.

Note: Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

CONCLUDING MATERIAL

Custodians:

Army - CR  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5935-4438-000)

Review activities:

Army - AR, CR4, MI  
Navy - AS, MC, OS  
Air Force - 19